

WHAT IS CLAIMED IS:

- 1     1.     A method for call handling, comprising:
  - 2             initiating a dialog between a user and an automated call handling system;
  - 3             receiving input from a user in response to an input request by the system;
  - 4             sending a human operator the user input, if the system can not interpret the
  - 5     user input;
  - 6             providing the system with an interpreted response generated by the operator
  - 7     based on the user input;
  - 8             continuing the dialog between the user and the system if the interpreted
  - 9     response is confirmed by the user; and
  - 10            connecting the user to the operator if the interpreted response is not confirmed
  - 11    by the user.
- 1     2.     The method of claim 1 wherein the call handling system is an Interactive
- 2     Voice Response system.
- 1     3.     The method of claim 1:
  - 2             wherein the receiving element includes,
  - 3                 incrementing an Item Wide Frustration Index, if the system can not
  - 4             interpret the user input; and
  - 5                 repeating the input request, if the Item Wide Frustration Index is below
  - 6             a predetermined Item Wide Frustration Threshold; and
  - 7             wherein the sending element includes:
  - 8                 sending the human operator the user input, if the Item Wide Frustration
  - 9             Index is above the predetermined Item Wide Frustration Threshold; and
  - 10            resetting the Item Wide Frustration Index back to an initial value.

1     4.     The method of claim 1:  
2             wherein the sending element includes,  
3                     sending a human operator contextual information with respect to the  
4             input request and a set of user inputs generated by the user in response to the  
5             input request; and  
6             wherein the providing element includes,  
7                     permitting the operator to view the contextual information; and  
8                     playing back the user inputs for the operator.

1     5.     The method of claim 1 further comprising:  
2             connecting the user to the operator if the user begins to speak out of context.

1     6.     The method of claim 3 wherein the initiating element includes:  
2             setting the Item Wide Frustration Threshold to a fixed value.

1     7.     The method of claim 3 wherein the initiating element includes:  
2             setting the Item Wide Frustration Threshold to a predetermined value  
3     dependent upon an importance attribute associated with the user.

1     8.     The method of claim 3 wherein the initiating element includes:  
2             setting the Item Wide Frustration Threshold to a predetermined value  
3     dependent upon a personality attribute associated with the user.

1     9.     The method of claim 3 wherein the initiating element includes:

2           setting the Item Wide Frustration Threshold to a predetermined value  
3   dependent upon a frustration tolerance associated with the user.

1   10.   The method of claim 3 wherein the initiating element includes:  
2           setting the Item Wide Frustration Threshold to a predetermined value  
3   dependent upon a patience attribute associated with the user.

1   11.   The method of claim 3 wherein the initiating element includes:  
2           setting the Item Wide Frustration Threshold to a predetermined value  
3   dependent upon a physical attribute associated with the user.

1   12.   The method of claim 3 wherein the initiating element includes:  
2           setting the Item Wide Frustration Threshold to a predetermined value  
3   dependent upon a call connection attribute associated with the user.

1   13.   The method of claim 3 wherein the initiating element includes:  
2           setting the Item Wide Frustration Threshold to a predetermined value  
3   dependent upon an operator availability attribute associated with the system.

1   14.   The method of claim 3, wherein the sending element includes:  
2           incrementing a Transaction Wide Frustration Index if the Item Wide  
3   Frustration Index is above the predetermined Item Wide Frustration Threshold;  
4           providing the operator with an option to connect to the user if the Transaction  
5   Wide Frustration Index is above a first Transaction Wide Frustration Threshold; and  
6           connecting the user to the operator if the Transaction Wide Frustration Index is  
7   above a second Transaction Wide Frustration Threshold.

1     15.     A method for call handling, comprising:  
2             initiating a dialog between a user and an automated call handling system;  
3             receiving input from a user in response to an input request by the system;  
4             sending a human operator the user input, if the system can not interpret the  
5     user input;  
6             providing the system with an interpreted response generated by the operator  
7     based on the user input;  
8             continuing the dialog between the user and the system if the interpreted  
9     response is confirmed by the user;  
10            connecting the user to the operator if the interpreted response is not confirmed  
11    by the user; and  
12            wherein the receiving element includes,  
13                incrementing an Item Wide Frustration Index, if the system can not  
14            interpret the user input; and  
15                repeating the input request, if the Item Wide Frustration Index is below  
16            a predetermined Item Wide Frustration Threshold; and  
17            wherein the sending element includes,  
18                sending the human operator the user input, if the Item Wide Frustration  
19            Index is above the predetermined Item Wide Frustration Threshold; and  
20                resetting the Item Wide Frustration Index back to an initial value; and  
21            wherein the sending element includes,  
22                incrementing a Transaction Wide Frustration Index if the Item Wide  
23            Frustration Index is above the predetermined Item Wide Frustration Threshold;

24 providing the operator with an option to connect to the user if the  
25 Transaction Wide Frustration Index is above a first Transaction Wide  
26 Frustration Threshold; and  
27 connecting the user to the operator if the Transaction Wide Frustration Index is  
28 above a second Transaction Wide Frustration Threshold.

1 16. A system apparatus for call handling, comprising a:  
2 means for initiating a dialog between a user and an automated call handling  
3 system;  
4 means for receiving input from a user in response to an input request by the  
5 system;  
6 means for sending a human operator the user input, if the system can not  
7 interpret the user input;  
8 means for providing the system with an interpreted response generated by the  
9 operator based on the user input;  
10 means for continuing the dialog between the user and the system if the  
11 interpreted response is confirmed by the user; and  
12 means for connecting the user to the operator if the interpreted response is not  
13 confirmed by the user.

1 17. A system for automated call handling, comprising:  
2 a set of modules, for initiating a dialog with a user and receiving input from  
3 the user in response to an input request;  
4 a dialog router, for routing user and system information;  
5 an operator, and  
6 a dialog manager,

7                   for sending the operator the user input, if the system can not interpret  
8           the user input;  
9                   for receiving an interpreted response from the operator based on the  
10          user input;  
11                  for continuing the dialog between the user and the system if the  
12          interpreted response is confirmed by the user; and  
13                  for connecting the user to the operator through the dialog router if the  
14   interpreted response is not confirmed by the user.

1   18.   The system of claim 17, further comprising:  
2          a dialog record, for storing a record of the dialog between the user and the  
3   system.